Claims

[c1] A method of modulating apoptosis in a target cell population comprising the step of regulating the expression of E2F1 whereby the expression of Mcl-1 is increased responsive to the downregulation of E2F1.

[c2] The method of claim 1 wherein the apoptosis being modulated is Flavopiridol-induced apoptosis.

[c3] The method of claim1 wherein the occurrence of apoptosis is reduced by repression of E2F1.

[c4] The method of claim 1 wherein the repression of E2F1 is accomplished by contacting a target cell with an RNA inhibitor molecule.

[c5] The method of claim 4 wherein the RNA inhibitor molecule is a BS/U6 E2F1 RNAi plasmid.

[c6] A vector for modulating the expression of E2F1 in a target cell population comprising a BS/U6 E2F1 RNAi plasmid.

[c7] The vector of claim 6 wherein the BS/U6 E2F1 RNAi plasmid comprises:
a parent plasmid;

a first nucleotide sequence, wherein the first nucleotide sequence is SEQ. NO. 1;
a second nucleotide sequence, wherein the second nucleotide sequence is SEQ. NO. 2;
a third nucleotide sequence, wherein the third nucleotide sequence is SEQ. NO. 3;
a fourth nucleotide sequence, wherein the fourth nucleotide sequence is SEQ. NO. 4;
The vector of claim 7 wherein the parent plasmid is an empty BS/U6 RNAi vector further comprising:
an ApaI binding site,
a HindIII binding site, and
an EcoRI binding site.

[c8] The vector of claim 7 wherein SEQ. NO. 1 is annealed to SEQ. NO. 2.

[c9] The vector of claim 7 wherein the annealed product of SEQ. NO. 1 and SEQ. NO. 2 are ligated to the ApaI and HindIII sites of the parent plasmid.

[c10] The vector of claim 7 wherein SEQ. NO. 3 is annealed to SEQ. NO. 4.

[c11] The vector of claim 7 wherein the annealed product of SEQ. NO. 3 and SEQ. NO. 4 are ligated to the HindII and EcoRI sites of the parent plasmid.